

IN THE CLAIMS:

1. (currently amended) A method of performing service diagnostics on appliances, the method comprising:

connecting a diagnostic interface within a building housing ~~the~~ an appliance to a local area appliance network, wherein the diagnostic interface includes a display;

accessing ~~an~~ the appliance in the local area appliance network;

performing a service diagnosis of the appliance through ~~said~~ the diagnostic interface over the local area appliance network using service functions in the appliance;

implementing the diagnostic interface within a single device including the display, a processing circuitry generating service commands to perform the service diagnosis, and a power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line; and

adjusting servicing, by the diagnostic interface, ~~a characteristic of the appliance via the power line carrier modem, said servicing comprising at least one of adjusting a characteristic of the appliance and displaying to a technician the service diagnosis.~~

2. (original) The method of claim 1 wherein the local area appliance network comprises a power line carrier system.

3. (original) The method of claim 1 wherein accessing further comprises accessing a dedicated appliance controller in an appliance.

4. (previously presented) The method of claim 1 wherein the service functions comprise safety functions, parameter functions, and appliance status functions.

5. (previously presented) The method of claim 1 further comprising implementing said diagnostic interface in a computer.

6. (canceled)

7. (original) The method of claim 1 further comprising connecting to a remote system to retrieve service diagnostic information.

8. (original) The method of claim 1 wherein performing service diagnosis includes diagnosing and servicing the appliance based on the appliance diagnosis.

9. (original) The method of claim 8 wherein servicing the appliance comprises patching appliance firmware.

10. (original) The method of claim 8 wherein servicing the appliance comprises adjusting appliance parameters.

11. (original) The method of claim 1 further comprising maintaining an external database of appliance information based on diagnosis of the appliance.

12. (currently amended) A diagnostic interface for performing service diagnostics on appliances, the diagnostic interface comprising:

a display for viewing diagnostic and service information;

processing circuitry for generating service commands for an appliance; and

a power line carrier communication interface configured to be connected to a local area appliance network within a building housing the appliance, wherein said power line carrier communication interface facilitates transmitting the service commands to the appliance and receiving appliance diagnostic results on a power line carrier communication system, and said diagnostic interface implemented within a single device including said display, said processing circuitry generating the service commands to service the appliance, and said power line communication interface configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to ~~adjust a characteristic of~~ service the appliance via said power line carrier communication interface by at least one of adjusting a characteristic of the appliance and displaying to a technician the appliance diagnostic results.

13. (original) The diagnostic interface of claim 12 further comprising an appliance bus interface for communicating with the appliance.

14. (original) The diagnostic interface of claim 12 further comprising a remote service center interface.

15. (original) The diagnostic interface of claim 14 wherein the diagnostic interface gathers appliance statistics to send to a remote service center over the remote service center interface.

16. (original) The diagnostic interface of claim 12 further comprising a user interface to facilitate service diagnostics.

17. (original) The diagnostic interface of claim 12 wherein the appliance comprises a refrigerator.

18. (original) The diagnostic interface of claim 12 wherein the appliance comprises an oven.

19. (original) The diagnostic interface of claim 12 wherein the appliance comprises a heating system.

20. (original) The diagnostic interface of claim 12 wherein the appliance comprises a cooling system.

21. (original) The diagnostic interface of claim 12 wherein the appliance comprises a lighting system.

22. (currently amended) A diagnostic system for providing access to service diagnostics on an appliance, the system comprising:

a local area appliance network coupled to the appliance;

a diagnostic interface configured to be connected to said local area appliance network within a building housing the appliance, said diagnostic interface comprising a display,

wherein said diagnostic interface facilitates accepting service diagnostics commands destined for the appliance, ~~the diagnostics~~ said diagnostic interface implemented within a single device including a display device, a microprocessor configured to generate the diagnostics commands, and a power line carrier modem configured to modulate data to communicate the data over an alternating current (AC) power line, wherein said diagnostic interface configured to ~~adjust a characteristic of service~~ the appliance via said power line carrier modem by at least one of adjusting a characteristic of the appliance and displaying to a technician the diagnostics commands; and

a dedicated appliance controller for receiving and executing the diagnostics commands.

23. (original) The system of claim 22 wherein the local area appliance network comprises a power line carrier network.

24. (original) The system of claim 22 wherein the diagnostic interface comprises a computer.

25. (previously presented) The system of claim 22 wherein the diagnostics interface comprises a PC card interface and an appliance bus interface.

26. (original) The system of claim 22 further comprising a communications interface between the local area appliance network and the dedicated appliance controller.

27. (original) The system of claim 22 further comprising a remote system, the remote system connectable to the diagnostic interface via an Internet connection.

28. (original) The system of claim 22 wherein the dedicated appliance controller is contained within the appliance.

29. (previously presented) The system of claim 22 wherein the power line carrier modem allows the diagnostic interface to communicate with an appliance via a power line carrier system.

30. (previously presented) The method of claim 1 wherein said adjusting the characteristic comprises changing, by the diagnostic interface, the characteristic of a home appliance via the power line carrier modem.

31. (previously presented) The method of claim 1 further comprising translating, by the power line carrier modem, between an appliance protocol of the appliance and a power line carrier protocol.

32. (canceled)